

Essay on the Genus MYLLÆNA; by the REV. A. MATTHEWS,
M.A.

The Genus *Myllæna* has always held a special interest in my mind, inasmuch as my first attempt at dissection was made upon its species. As long ago as February, 1834, while yet a boy, my attention was one day much excited by observing upon a piece of bark, which I had removed from a Willow tree, growing at the edge of some water near Weston-on-the-green in Oxfordshire, a multitude of small Brachelytrous insects, packed close together side by side, and in a dormant condition; there were many hundreds all of one species, and, which appeared to me very remarkable, each individual held his abdomen raised perpendicularly from his body, without at any time altering its position. When on the following morning I examined my captures, I was yet more surprised by seeing that two long slender spines proceeded from the mouth of every specimen. I soon found by dissection that these spines arose from the labium, but not knowing much of such matters I communicated my discovery to Professor Westwood, who very kindly assisted me in the investigation. My interest having been thus aroused, I hunted carefully for others of the same genus, and in the course of two or three years had the good fortune to discover five additional species. At length my Father determined to publish the Essay on that genus, which appeared in the "Entomological Magazine" of January, 1838; in this Essay the genus was called *Centroglossa* from the styles of the mouth, and six species were described, all of which are still recognized as distinct. But the attention of Entomologists on the Continent had been simultaneously turned in the same direction, Dr. Erichson in his genus *Myllæna* had already published descriptions of three of the species contained in the Essay I have mentioned; these three, *M. dubia*, *intermedia*, and *minuta*, retain the names assigned to them by Dr. Erichson; the other three, *M. elongata*, *gracilis*, and *brevicornis*, are still known by my Father's names.

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The synonymy of the genus has since been much confused by authors having almost simultaneously described the same species under different names, and also by the distribution of type specimens incorrectly labelled. I have lately endeavoured to investigate this matter, and through the kind assistance of M. Fauvel, Mr. P. B. Mason, and others, hope that I have made some progress towards reducing the synonymy into a better form.

Of the twelve species described in the following pages *M. gracilicornis*, *M. Fowleri*, *M. Græca*, *M. Masoni*, and *M. infuscata* are new to the British List.

M. gracilicornis was taken by my friend Mr. Fowler, in the spring of 1881, near Ventnor, in the Isle of Wight.

M. Fowleri I have so named after the captor of *M. gracilicornis*. It is a fine and distinct species, found some years ago by myself in Sherwood Forest, and easily distinguished from its congeners by its rather short jet-black antennæ.

M. græca is introduced into our Fauna on the authority of two specimens found in the collection of the late Mr. T. Wilkinson, of Scarborough; the mounting and setting of these insects clearly prove that they had been taken by Mr. Wilkinson himself, and probably on the sea shore.

M. Masoni is conspicuous even at first sight in life, from the sooty appearance of every part of its body; our examples of this species were found by my brother, Mr. H. Matthews, and myself, many years ago in Oxfordshire; I have called it "*Masoni*" in honour of Mr. P. B. Mason, whose zeal for Entomology is too well known to require any comment from myself.

M. infuscata appears to be universally distributed; we have found it in Oxfordshire and elsewhere; it is generally mixed up in collections with *M. gracilis*, but may be recognized by its smaller size, more linear form, shorter elytra, and longer antennæ. It is very clearly described by Dr. Kraatz. I think the *M. minima* of that author must be referred to small and pale coloured examples of this species. In a genus like *Myllæna*, where the greater part resemble each other so closely in colour,

structural differences are absolutely necessary to separate the species; a slight variation in size, although useful as an auxiliary, cannot by itself be considered sufficient. I must however add that I have not seen any authentic type of *M. minima*, though many British specimens agree entirely with Dr. Kraatz's descriptions. In Mr. Mason's collection there is a specimen of *M. intermedia*, which differs from the normal type of that species in characters precisely similar to those on which Dr. Kraatz separates *M. minima* from *M. infuscata*.

All, except one, of the British species of *Myllæna*, are very similar in their habits of life; they may be found in damp moss, or at the roots of herbage growing on the margins of either pools or running water. The only exception to this rule, as far as I know, exists in *M. elongata*; the habits of that species resemble those of the *Bledii* and *Heteroceri*, with whom I have generally found it associated; like them, it conceals itself in mud, especially that of a clayey nature, at the margin of stagnant water, and may be obtained in the same way, by pressing lightly the mud with your foot; it will then immediately emerge from its hiding place, and running with extreme velocity for a short distance, will eventually open its wings and fly away.

The dimensions of the various species of this genus, as given by Dr. Kraatz and other authors, can only be used comparatively, having generally been taken from dried specimens more or less contracted, they can in no case be regarded as representing the true length of the insect. In the following descriptions the measurements have been made from specimens restored to their life form, and therefore very much exceed the length given in previous descriptions.

Notwithstanding their similarity of colour, there is not much difficulty in distinguishing the various species of *Myllæna*, if due attention is paid to the comparative developement of the parts of the body, especially of the thorax and elytra. It is chiefly among the smaller species that confusion exists; but even when the abdomen is so much contracted that its true shape becomes lost, they may still be distinguished by a careful comparison of the antennæ, thorax, and elytra. For this purpose the following characters of the four smaller species will be found very useful.

M. minuta may be known by its longer and broader thorax and elytra, and long slender antennæ.

M. Masoni is the smallest of the known species, and easily recognized by its sooty-black legs and antennæ, and very short elytra.

M. infuscata is distinguished by its very short and narrow thorax and elytra, rather long and slender antennæ, and usually fuscous appearance of all parts of its body.

M. gracilis is larger than either of the foregoing, and differs from all in its robust and shorter antennæ, which are distinctly incrassated towards the apex.

It is difficult to determine whether an isolated specimen belongs to *M. minuta* or *M. infuscata*; when the two species are placed side by side, their difference is immediately apparent, but owing to the rarity of *M. minuta* this is not always possible, and consequently, as *M. infuscata* is much the most common of the small species, the greater part of those usually labelled "*minuta*" belong in truth to "*infuscata*."

SYNONYMIC LIST.

STAPHYLINIDÆ.	Fowleri, Matth.
GYMNUSINA.	Kraatzii, Sharp.
MYLLÆNA, Erichson.	glauca, Rye.
Centroglossa, Matth.	elongata, Matth.
dubia, Grav.	glauca, Aubé.
conuroides, Matth.	Græca, Kr.
? valida, Muls.	gracilis, Matth.
intermedia, Er.	forticornis, Kr.
attenuata, Matth.	infuscata, Kr.
minuta, Grav.	v. minima, Kr.
minuta, Matth.	brevicornis, Matth.
Masoni, Matth.	? gracilis, Heer.
gracilicornis, Fairm.	? rubescens, Rey.
? elongata, Kr.	? grandicollis, Kies.
? incisa, Rey.	

I have not been able to verify the synonymus marked?, and very much doubt whether any of them except "*grandicollis*" refer to the species to which they are assigned in the Catalogue of H. H. Stein and Weise; "*gracilis*, Heer" and "*rubescens*, Rey" probably refer to "*M. Græca*"; "*elongata*, Kr." and "*incisa*, Rey" are more likely to refer to "*M. elongata*" than to "*M. gracilicornis*."

Myllæna dubia, Grav.

L.c. $1\frac{1}{2}$ – $1\frac{3}{4}$ lin. = 3–3.50 mm. Fuscous black, clothed with a fuscous pubescence, rather coarsely tuberculate, widest at the apex of the elytra; head acutely attenuated in front, mouth yellow, thorax widest at the base; elytra as long and rather wider than the thorax; abdomen as long as the anterior parts of the body united, conic, acutely attenuated towards the apex, penultimate segment edged with white, apical segment pale; legs and antennæ pitchy-testaceous.

Differs from the rest of the genus in its larger size, much broader thorax and elytra, and in the much greater dilatation of the base of the thorax.

This species is not so generally distributed as the following.

Myllæna intermedia, Er.

L.c. 1 – $1\frac{1}{2}$ lin. = 2–2.50 mm. Fuscous black, clothed with a very short fuscous pubescence, closely and finely tuberculate; head much attenuated in front, mouth yellow; thorax slightly dilated at the base; elytra scarcely wider than the thorax; abdomen scarcely as long as the anterior parts of the body, conic, acutely attenuated towards the apex, apical segment and posterior half of the penultimate pale, edge of the penultimate segment white; legs and antennæ pitchy-testaceous.

Differs from *M. dubia* in its smaller size, narrow form, less dilatation of the base of the thorax, paler apex of the abdomen, and finer sculpture.

This is perhaps the most common of all the *Myllænæ*, and is to be found in any marshy place.

Myllæna minuta, Grav.

L.c. $\frac{6-7}{8}$ lin. = 1.50-1.75 mm. Fuscous black, clothed with short grey pubescence, finely and closely tuberculate, head much produced and attenuated in front; mouth yellow; thorax slightly dilated at the base; elytra not longer, but rather wider than the thorax, abdomen shorter than the anterior parts united, obtusely attenuated, apical and greater part of the penultimate segments rufo-testaceous; legs and antennæ testaceous.

Differs from the foregoing species in its minute size, longer thorax, and shorter and stouter antennæ. From *M. Masoni* it may be known by its broader and longer thorax and elytra, and by its more depressed form.

M. minuta seems to be in truth a rare insect. The greater part of the supposed examples of this species prove on examination to belong to *M. infuscata*, but its long and dilated thorax and long elytra, readily distinguish *M. minuta* from *M. infuscata*, in which the same parts are unusually short and narrow.

Myllæna Masoni, n. sp.

L.c. $\frac{5-6}{8}$ lin. = 1.25-1.50 mm. Fuliginose aterrima, pubescens nigrescenti vestita, sat leviter tuberculata; capite magno lato antice producto, ore concolori; pronoto longo, postice parum dilatato, ante basim latiori, lateribus rotundatis; elytris brevibus, capite atque pronoto multo brevioribus, parum angustioribus, distincte tuberculatis, ad suturam valde obliquiter truncatis; abdomine partibus cæteris vix pariter longo, obtuse attenuato, apice concolori; pedibus atque antennis sat brevibus fuliginose nigro-piceis.

Head rather large conic obtusely produced, distinctly tuberculate, mouth concolorous; eyes moderate not prominent; antennæ rather short sooty-black with the apical joint acutely pointed; palpi sooty-black.

Thorax moderate rather longer and broader than the head, distinctly tuberculate, widest before the base, sides rounded and faintly margined, basal margin slightly rounded with the angles nearly right angles.

Scutellum concealed by the thorax.

Elytra small rather narrower and much shorter than the

thorax, distinctly tuberculate, sides straight, basal margins very obliquely truncate towards the suture, with a moderate emargination within the exterior angles.

Abdomen moderate obtusely conic, scarcely as long as the rest of the body, with the apex obtuse, concolorous.

Legs rather short robust, sooty-black, with the tarsi short and robust.

Underparts pitchy-black.

Differs from *M. minuta* in its smaller size, more robust form, short and very obliquely truncate elytra, sooty-black colour, dark pubescence, and short robust pitchy-black legs and antennæ.

M. Masoni appears to be a very rare species; the only examples I have seen are those taken by my brother and myself, near Weston-on-the-green, in Oxfordshire.

Myllæna gracilicornis.

L.c. $1\frac{1}{4}$ - $1\frac{1}{2}$ lin. = 2.50-3 mm. Deep black clothed with grey pubescence, very finely tuberculate or alutaceous, head rather large; thorax long, widest before the base; elytra rather shorter and narrower than the thorax; abdomen long and much attenuated, longer than half the entire length of the body, apex concolorous; antennæ deep black, very long and very slender; legs long pitchy-black.

Differs from all the other species in its very long and very slender black antennæ.

Two specimens of this species were found near Ventnor, in the Isle of Wight, by the Rev. W. W. Fowler.

Myllæna Fowleri, n. sp.

L.c. $1\frac{1}{4}$ - $1\frac{1}{2}$ lin. = 2.50-3 mm. Obconica sat lata et depressa, aterrima pube brevi nigrescenti vestita, distincte tuberculata: capite magno lato, ore concolori; pronoto sat longo, capite longiori et paulum latiori, ante basim latiori lateribus leviter rotundatis et leviter marginatis, margine basali valde rotundata; elytris perbrevibus pronoto multum brevioribus, pariter latis, margine basali sinuata; abdomine lato conico, partibus cæteris longiori, segmentis omnibus nigris, acie extremâ penultimi albidâ; antennis sat brevibus aterrimis; pedibus sat longis nigro-piceis.

Head large and broad, rather short, distinctly tuberculate, mouth concolorous; eyes rather large and prominent, antennæ rather short, deep black.

Thorax rather long, longer and rather broader than the head, distinctly tuberculate, widest before the base, sides slightly rounded and margined, basal margin very much rounded and margined with the angles rather obtuse.

Scutellum concealed by the thorax.

Elytra very short, much shorter and not wider than the thorax, distinctly tuberculate, sides nearly straight, deeply notched within the posterior angles.

Abdomen broad and conic, rather longer than the anterior parts of the body combined, all the segments black, with the edge of the penultimate segment conspicuously white, apical segment rather obtuse.

Legs moderate, pitchy-black, with all the tarsi yellow.

Underparts deep black.

Differs from all its congeners in its purely conical form and velvety black colour; from *M. gracilicornis* it may be known by its much broader form, and short robust antennæ.

Myllæna Kraatzii.

L.c. $1\frac{1}{2}$ – $1\frac{3}{4}$ lin. = 3 = 3.50 mm. Elongate, fuscous black, clothed with short fulvous pubescence, closely and rather finely tuberculate throughout; head moderate, rather short with the labrum alone rufo-fuscous; thorax rather large shining and very convex, much rounded in front with two erect setæ near each anterior angle, widest before the base, sides and basal margin slightly rounded and margined, posterior angles rounded; elytra short, rather narrower and much shorter than the thorax, with two erect setæ near each shoulder, deeply notched within the posterior angles and obliquely truncate towards the suture; abdomen longer than half the entire length of the body, very obtusely attenuated, each segment furnished with a strong erect seta near the hinder angles, apical segment rufous, penultimate edged with white; antennæ and palpi piceous more or less pale; hinder legs piceous, anterior legs and all the tarsi testaceous.

Differs from *M. elongata* in its shorter and broader form,

much longer and broader thorax and elytra, and darker and shorter legs and antennæ.

M. Kraatzii was found by Mr. Rye, near Wimbledon Common, and subsequently by Mr. T. Wilkinson, near Scarborough, and recently in some numbers near Chobham, by Mr. E. A. Butler, of Hastings; it seems therefore to inhabit elevated and peaty localities. I have also received this species from France.

I have been careful in describing this very distinct species, because it has been unaccountably confounded with others of the genus. By some it has been mistaken for *M. glauca*, of Aubé, which is synonymous with *M. elongata*; and in the Catalogue of H. H. Stein, and Weise, its name is quoted as a synonym of *M. gracilicornis*, to which it bears no possible resemblance. The erect setæ mentioned in the above description are more or less common to all *Myllænæ*, but being naturally liable to abrasion are very seldom found in perfect preservation, and cannot therefore be relied upon as a differential character.

Myllæna elongata.

L.c. $1\frac{3}{4}$ –2 lin. = 3·50–4 mm. Very long and narrow, fuscous covered with a dense grey sericeous pubescence, closely and rather strongly tuberculate; head rather large, mouth yellow; thorax moderate not dilated posteriorly, elytra as long and as wide as the thorax, abdomen very long, twice as long as the anterior parts of the body, obtusely attenuated with the apical and half the penultimate segments rufous; legs long rufo-testaceous, antennæ long, pitchy testaceous.

Differs from its congeners in its large size, narrow elongate subparallel form, long legs and antennæ, and shining silky pubescence.

M. elongata is universally distributed, but not very abundant; it differs from the usual habits of the genus, and, as far as my own experience goes, is generally found on beds of mud devoid of herbage.

Myllæna græca.

L.c. $1\frac{1}{4}$ – $1\frac{1}{2}$ lin. = 2·50–3 mm. Elongate, very slender and much attenuated posteriorly, rufo-fuscous with the thorax,

elytra, and apical half of each segment of the abdomen rufous, clothed with grey pubescence, very finely tuberculate, or alutaceous; head moderate, thorax rather short, widest before the base; elytra short, shorter and narrower than the thorax; abdomen narrow, acutely attenuated, twice as long as the anterior parts of the body; legs and antennæ short, robust rufo testaceous.

Differs from all the other species in its slender attenuated form, and rufous colour.

I am much pleased to be able to add this very elegant species to the British List. Among some unnamed Myllænæ collected by the late Mr. T. Wilkinson, of Scarborough, and kindly sent to me by Mr. P. B. Mason, I found two examples of *M. græca*, and, as particles of sea-sand were still adhering to both specimens, I have every reason to conclude that they must have been taken on the shore near Scarborough. From a label attached to a type specimen received from M. A. Fauvel, this rare species appears to have occurred also in Corsica.

Myllæna gracilis.

L. c. $1-1\frac{1}{4}$ lin. = 2-2.50 mm. Long and narrow, fuscous-black, clothed with grey pubescence, closely and strongly tuberculate; head large and broad; thorax small almost quadrate; elytra longer and broader than the thorax; abdomen longer than the anterior parts of the body combined, much attenuated with the apical and greater part of the penultimate segments rufous; legs and antennæ rather short, robust, rufo-piceous; antennæ distinctly incrassated towards the apex.

Differs from other species in its smaller size, short and robust legs and antennæ.

M. gracilis is the most common of the smaller species.

Myllæna infuscata.

L.c. $\frac{3}{4}$ -1 lin. = 1.50-2 mm. Fuscous thickly clothed with grey pubescence, closely and rather strongly tuberculate; head rather short and broad, mouth yellow, thorax short slightly dilated at the base; elytra shorter and narrower than the thorax; abdomen long obtusely attenuated, half as long again as the rest of the body, with the terminal segments wholly rufous; legs and antennæ moderate, slender rufo-testaceous.

Differs from *M. gracilis* in its smaller size, narrow elongate form, short elytra, longer and more slender antennæ, and fuscous colour.

This and the preceding are very often mistaken for *M. minuta*, but may be distinguished from that species by their much shorter thorax and elytra; this difference although very conspicuous, is difficult to determine without actual comparison, not always easily attainable, as the true *M. minuta* is somewhat rare.

Myllæna brevicornis.

L c. $1\frac{1}{4}$ – $1\frac{3}{4}$ lin. = 2.50–3.50 mm. Rufo-testaceous, clothed with flavescent pubescence, very convex and rather shining, finely and closely tuberculate or alutaceous; head large; thorax rather long, widest at the base; elytra short, much shorter but not broader than the thorax, very obliquely truncate towards the suture; abdomen rather obtusely attenuated, longer than the anterior parts of the body combined, sometimes rather dusky with the apical half of each segment rufous; legs and antennæ yellow, the latter short and much incrassated.

Differs from all except *M. græca* in the rufo-testaceous colour of the whole body, and from *M. græca* in its much larger thorax, broad and obtuse form, and very robust yellow antennæ.

M. brevicornis is universally distributed, and appears to be of a more wandering disposition than any of its congeners; it is the only species of *Myllæna* which I have obtained by sweeping herbage, and is sometimes found in wooded and not marshy localities.

Besides the two novelties described in this Essay, the British List now comprises all the European species of *Myllæna*; since I have been informed by M. A. Fauvel, that the insect introduced into this genus in the Catalogue of H. H. Stein and Weise under the name of *M. paradoxa* is not a *Myllæna*, but belongs to *Homœusa*. It is therefore evident that this country is peculiarly suited to the habits of the genus, and I have no doubt but that fresh species remain to be discovered, if proper attention be given to their pursuit. It may assist in accomplishing this object, if I mention my own long experience in collecting these insects. The localities which they frequent have been already mentioned, but as their proper preservation is on account of their

fragile structure very important, a word or two on that matter will not be out of place. I have found that the only way to preserve in any degree their elegant life-form, is to immerse them as soon as captured in small bottles filled with either Spirits of Wine mixed with not more than one-third of water, or with pure Gin; on the following day they should be taken singly from the bottles, and laid for a few minutes only on Blotting Paper, and then extended on Card with a strong solution of Gum Tragacanth; in this condition they must remain undisturbed until perfectly dried, they can be set, if required, at any subsequent period. If taken from the moist situations which they always inhabit, and placed in dry bottles, they soon die, and become irretrievably contracted, unsightly and irrecoznizable objects.

My best thanks are due to M. A. Fauvel, M. A. Fairmaire, Dr. Power, Dr. Sharp, Mr. P. B. Mason, Mr. Fowler, Mr. Blatch, and Mr. Butler, of Hastings, for the valuable assistance they have so kindly given.
